



The Ultrathan® PP cushioning ring is used for sealing cushioning pistons in pneumatic cylinders in the end position. By means of the sealing lip its special shape provides sealing toward the cushioning piston and concurrently acts as a valve during the return stroke. The combination of geometry and material ensures high wear resistance.

- No mechanical check valves required since their function is performed by the cushioning rings.
- High cushioning consistency due to automatic centering, even in the case of misalignment of the cushioning spear and the cylinder head.
- Optimum use of design-related cushion travel.
- Robust seal profile for harshest operating conditions.
- Immediate response to reversed direction thanks to incorporated venting channels.
- Extreme wear resistance.
- Easier installation.
- Excellent media resistance in case of suitable compound selection.
- Installation in closed housings.

Range of application

For pneumatic cylinders with end-position cushioning.

Operating pressure	≤ 16 bar ¹⁾
Operating temperature	
PP NBR N3589	-20 °C to +80 °C
PP TPU P5008	-35 °C to +80 °C
Sliding speed	≤ 1 m/s
Media	Compressed air, both lubricated and oil-free (after greasing for fitting)

¹⁾ Higher pressure peaks during cushioning process are considered.

Compounds

NBR and FKM version

Standard: N3589, NBR compound (≈ 85 Shore A).

For low temperatures: N8613, NBR compound (≈ 80 Shore A).

For high temperatures: V3839, FKM compound (≈ 90 Shore A).

PUR version

Standard: P5008, PUR compound (≈ 94 Shore A).

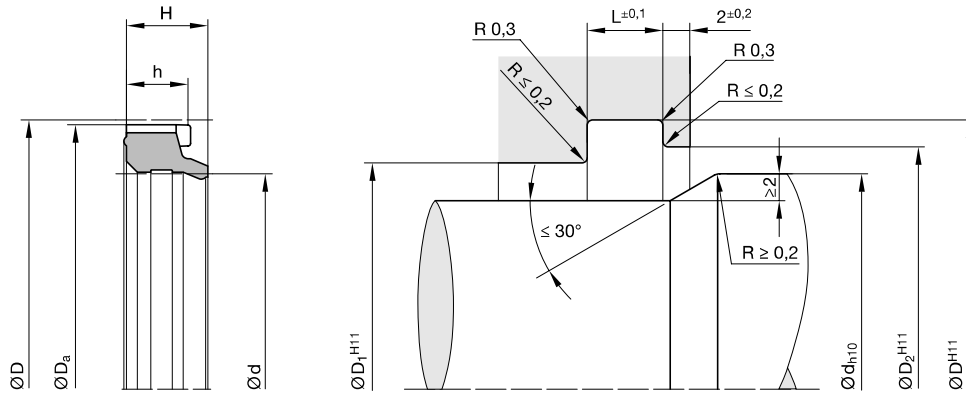
For low temperatures: P5009, PUR compound (≈ 94 Shore A).

Installation

The profile PP cushioning seals are easily snapped into the groove, which should be free of all contaminants and foreign particles before installation. Care should be taken that the sealing lips are not damaged by sharp edges during installation.

Initial lubrication is essential for very long service life.

In case of special operating conditions (specific pressure loads, temperature, speed, use in water, HFA, HFB fluids etc.), please contact our consultancy service for a selection of the material and design best suiting your particular application requirements.



For surface finish, lead in chamfer and other installation dimensions see „General installation guidelines“.

d	D	H	h	D _a	D ₁	D ₂	L	Order code
PP NBR N3589								
5	9	4.1	3.2	8.7	5.5	7	3.7	PP 0509 N3589
6	10	4.1	3.2	9.7	6.5	8	3.7	PP 0610 N3589
8	11.6	3.5	2.8	11.3	8.5	10	3.3	PP 0811 N3589
9.5	15	4.6	3.7	14.7	10	12	4.5	PP 0915 N3589
10	18	7.8	6.3	17	10.5	15	7	PP 1018 N3589
12	18	5	4.1	17.8	13	15.5	4.8	PP 1218 N3589
12	20	7.8	6.3	19.1	13	17	7	PP 1220 N3589
14	22	7.8	6.3	21.1	15	19	7	PP 1422 N3589
16	22	5.5	4.5	21.5	17	19.5	5.2	PP 1622 N3589
16	24	7.8	6.3	23.1	17	21	7	PP 1624 N3589
18	26	7.8	6.3	25.1	19	23	7	PP 1826 N3589
20	28	7.8	6.3	27.1	21	24	7	PP 2028 N3589
22	30	7.8	6.3	29.1	23	26	7	PP 2230 N3589
25	33	7.8	6.3	32.1	26	29	7	PP 2533 N3589
28	36	7.8	6.3	35.1	29	32	7	PP 2836 N3589
30	40	7.8	6.2	39.1	31.5	35	7	PP 3040 N3589
32	42	7.8	6.2	41.1	33.5	37	7	PP 3242 N3589
36	46	7.8	6.2	45.1	37.5	41	7	PP 3646 N3589
40	50	7.8	6.2	49.1	41.5	45	7	PP 4050 N3589
50	60	7.8	6.2	59.1	51.5	55	7	PP 5060 N3589
50	67	11	11	66.2	53	58	12.5	PP 5067 N3589
57	74	11	11	73.2	60	65	12.5	PP 5774 N3589
70	87	11	11	86.3	73	78	12.5	PP 7087 N3589
78	95	11	11	94.3	81	86	12.5	PP 7895 N3589
PP TPU P5008								
8	11.6	3.5	2.8	11.1	8.5	10	3.3	PP 0811 P5008
9.5	15	4.6	3.7	14.7	10	12	4.5	PP 0915 P5008
12	18	5	4.1	17.8	13	15.5	4.8	PP 1218 P5008
14	22	7.8	6.3	21.05	15	19	7	PP 1422 P5008
16	22	5.5	4.5	21.5	17	19.5	5.2	PP 1622 P5008
16	24	7.8	6.3	23.1	17	21	7	PP 1624 P5008
18	26	7.8	6.3	25.1	19	23	7	PP 1826 P5008
20	28	7.8	6.3	27.1	21	24	7	PP 2028 P5008

Further sizes on request.